

Hazardous Substances Advisory Committee (HSAC)

H4 Chemicals Indicator

June 2020

Commission

The steering group for the H4 indicator 'Exposure and adverse effects of chemicals to wildlife in the environment' requests that the committee supports the validation of the proposed approach for reporting this indicator. This indicator is one of a series of indicators under the Defra Outcome Indicator Framework (OIF) created to enable the reporting of progress against commitments under the UK Government's 25-Year Environment Plan (25-YEP). We would like the committee to:

1. **Review** the H4 indicator framework as outlined in the UK Centre for Ecology and Hydrology (UKCEH) report '**Development of a dashboard approach for the H4 indicator: exposure and adverse effects of chemicals on wildlife in the environment**'.
2. Provide a short series of **recommendations** for the future use of the H4 framework, taking into account or in addition to those points raised in the UKCEH report '**Issues to consider for the use of a dashboard for the H4 chemicals indicator**'.

The written review will be provided in advance of the meeting and used to inform the discussion at the 26th HSAC meeting in July. A set of recommendations will be developed through the discussion and formed into a short two-page paper with a series of clear recommendations with justifications.

Given the broad chemicals coverage of H4, it should be noted that the steering group of H4 is also seeking validation of the approach through the Expert Committee on Pesticides. Where resolution of conflicts in recommendations is required these will be considered jointly through a future commission.

Recommendations will be used to inform future work plans and reporting of H4 in the OIF's annual reports.

Delivery

The committee is asked to provide a written review (using a review template provided) of the H4 indicator framework by 25th June to feed back to the Environment Agency team, who lead the work through collaboration with related organisations, in advance of the 26th HSAC meeting on 9th July where this will be discussed. The committee is asked to provide their initial thoughts for individual recommendations to the HSAC secretariat by 7th July to

be collated ahead of the meeting. The Secretariat will provide a template document should committee members wish to use this, alternatively recommendations can be sent directly to the Secretariat. Discussion will also be held at the meeting to develop a series of recommendations for the future of the work plan. This will form the basis for the development of a short, two-page summary document of recommendations which will be delivered to the Environment Agency team by 24th July.

Background

The H4 indicator and the 25-Year Environment Plan

The government published the 25-YEP in January 2018 setting out goals for improving the environment in England. The Department for Environment, Food and Rural Affairs (Defra) created an OIF to help monitor changes in the environment and check progress towards the long-term vision of the 25-YEP. This helps enable the government and other relevant regulatory bodies to ensure we are taking appropriate action.

The OIF was outlined in a publication in May 2019 which also contained descriptions of the different indicators within the OIF and reported on some of them at the time. There are 10 themes under the OIF. Key indicators for chemicals are under the theme 'H Biosecurity, chemicals and noise'. These comprise:

- H3 Emissions of mercury and persistent organic pollutants to the environment
- H4 Exposure and adverse effects of chemicals on wildlife in the environment

There are also indicators relating to chemicals or potentially using chemicals data under other themes, e.g. 'B Water' and 'J Resource use and waste themes'. The H4 indicator is classed as 'under development' and the current description for H4, which is an update to that published in May 2019, is at the back of the UKCEH report 'Development of a dashboard approach for the H4 indicator: exposure and adverse effects of chemicals on wildlife in the environment'.

There are no specific numerical targets in the 25-YEP that can be linked to the H4 indicator, but there is a general goal to 'make sure that chemicals are safely used and managed, and that levels of harmful chemicals entering the environment (including through agriculture) are significantly reduced' which H4 complements.

The H4 indicator is more complex than many others under the OIF given that it can be used to represent many substances and compartments (terrestrial, freshwater and marine).

The H4 indicator development work

The work involves representatives across relevant technical, regulatory and policy areas. While the Environment Agency leads the work on this indicator, it is overseen by a steering group with colleagues including those from the Environment Agency, Natural England,

Defra, and the Health and Safety Executive (and UKCEH). Technical working groups involved include and extend beyond these organisations. To date we have:

- Established what existing and potential data sources might feed into the H4 indicator, the availability of those data and other characteristics, and where there is commonality in the chemicals covered under each of the sources. Following OIF steer, we have focussed on developing indicators across all three environmental compartments.
- Divided the indicator into chemical groups (pesticides and biocides, PBT substances, heavy metals and emerging risks) and established technical working groups for the first three that include and extend beyond the above organisations.

Emerging risks are not yet considered but HSAC's view on whether there is scope to bring in endpoints that look at this area, and availability of reliable data, are welcomed.

- Decided to focus on reporting exposure and risk, where thresholds exist, for the H4 indicator.

Adverse effects are not currently part of our H4 framework, but will be considered as relevant information becomes available and may be presented separately. Work is planned to collect paired chemical and ecological data in freshwater. We are not seeking comments on how to approach adverse effects at the current time.

The focus of H4 is currently wildlife only, not human health. This element was withdrawn by the OIF team owing to less certainty over the availability of human biomonitoring data. To reflect this change, we have focussed on wildlife thresholds and not adopted EQSs that are based on human health endpoints. HSAC are invited to consider the impact on this indicator and options for future development.

- Held a multiorganisational workshop comprising technical and policy experts to present key points around the data for each chemical group and decided how to present the indicator. It was agreed to use a proposed dashboard format with an accompanying report describing the underlying data.
- Trialled the framework for reporting as proposed at the workshop. The UKCEH reports are the outputs from this trial and also suggest future enhancements and requirements.

We are now seeking independent review of our framework for future reporting against the H4 indicator and to use comments and recommendations to refine our indicator. We may be limited in what we can incorporate into our reporting this year (20/21), but are keen to consider HSAC's recommendations for future planning and improvements.

Policy linkage

The work links to the 25-YEP as described above and helps demonstrate progress on commitments on the usage and management of chemicals and their reduction in the environment. PBT substances (mercury/persistent organic pollutants), heavy metals and pesticides were specifically chosen as relevant chemical groups because of their relevance to management commitments in the 25-YEP. An OIF progress report is published annually and the H4 indicator description forms part of this. The indicator work also informs a broader report looking at progress against the 25-YEP.

In the 25-YEP, the Government made clear its commitment to publishing a Chemicals Strategy to set out an ambitious approach to the management of chemicals throughout their lifecycle to support improvements in our water, air, soil and biodiversity, in our marine and land environments, and public health. It will set priorities for action in these areas to achieve our goals and measure success. Elements of work resulting from the Strategy have the potential to feed into the indicator and conversely the indicator may be a complementary tool when measuring the success of the Strategy's commitments.

Supporting documents

1. Development of a dashboard approach for the H4 indicator: exposure and adverse effects of chemicals on wildlife in the environment (UKCEH).
2. Issues to consider for the use of a dashboard for the H4 chemicals indicator (UKCEH).

Useful information

1. A Green Future: Our 25 Year Plan to Improve the environment (The 25 Year Environment Plan), January 2018: <https://www.gov.uk/government/publications/25-year-environment-plan>.
2. Measuring environmental change: outcome indicator framework for the 25 Year Environment Plan. May 2019: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/802094/25-yep-indicators-2019.pdf.